National Institute of Environmental Health Sciences

Climatic relationships with specific clinical subtypes of depression

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Abstract:

Studies on the relationship between climate and unipolar depression rates have yielded mixed results, which could be attributed to the inclusion of heterogeneous clinical samples and the use of admission rather than onset dates. This study aimed to overcome these methodological issues. During an 8-year timeframe, onset rates of unipolar depressive episodes requiring hospitalization from individuals living up to 15 km from a selected meteorological station were stratified by clinical subtypes and modeled as Autoregressive Integrated Moving Average (ARIMA) functions of orthogonal climatic factors obtained by Principal Components Analysis (PCA). For comparison purposes, onset rates stratified by demographic factors and by diagnosis of Seasonal Affective Disorder (SAD) and admission rates were also modeled. The main findings were a negative 1-month delayed relationship between onset rates of episodes with melancholic features and a climatic factor mainly composed of ambient temperature/sunlight, and a negative 1-month delayed relationship between onset rates of episodes with psychotic features and a climatic factor mainly composed of barometric pressure. Results of this study support a climatic-rather than seasonal-influence in specific subtypes of depression. If replicated, they may have nosological and therapeutic implications.

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Resource Description

Exposure :

weather or climate related pathway by which climate change affects health

Temperature

Temperature: Fluctuations

Geographic Feature:

resource focuses on specific type of geography

None or Unspecified

Geographic Location:

resource focuses on specific location

Non-United States

Non-United States: Europe

European Region/Country: European Country

Other European Country : Spain

Health Impact: ☑

specification of health effect or disease related to climate change exposure

Mental Health/Stress

Mental Health Effect/Stress: Mood Disorder

Resource Type: ☑

format or standard characteristic of resource

Research Article

Timescale: ☑

time period studied

Time Scale Unspecified